D3.0 > Measurements
08:27PM
CH 5
591.0000 MHz
DOWNSTREAM 1/2
QAM256 6.0MHz
5360 kSps
Power 19.5 dBmV
MER 47.4 dB
Pre-BER <1.0E-8
Post-BER <1.0E-8
UPSTREAM DOWNSTREAM
OK
H30 Series
BACK
HOME
SETUP
ON
BATT.
LOAD
Televes

Big features, small package

Your go to meter for installation, remote monitoring or troubleshooting. Rugged, light-weight and extremely easy to use. ***Install, maintain, and troubleshoot DOCSIS 3.0, digital and analog cable TV networks, onsite or remotely***

The H30 Series meters are light weight hand-held units, packed with all the features needed to install and troubleshoot **DOCSIS3.0 networks** and television systems using QAM digital modulation as well as NTSC analog signals.

This handy little meter is even inexpensive enough to leave in your headend and use its **unique in its class remote measurement and control capabilities** to provide long term monitoring or to trouble shoot those hard to find, intermittent problems.

Available for the first time in such a portable and affordable package, its real-time digital processing engine gives the installers the lab-precision measurements needed in today's fulfillment environment.

New from Televes, **a go-to meter designed with the needs of a Cable TV operator in mind.**

Televes®

Remote Control & Measurements
In an affordable package

Control your meter and access your measurements from a smartphone, tablet, laptop or any other internet connected device. Ideal for extended signal tests over time in headends and broadband distribution networks. Leave your H30 connected to your headend or anywhere in your plant and **control the unit to measure signals and quality parameters remotely.** Once finished, export the results to your computer using your browser.

Rugged and Light Weight
Total reliability

A unique dual injected rubber and polycarbonate plastic housing ensures **the best protection and durability.** Weighing only one pound, **the H30 is comfortable to carry and use.** You can put it in your pocket or hang it from its sturdy built-in grommets using the provided shoulder strap... you will hardly know it's there!

Televes®

Intuitive User Interface
Reducing the learning curve

Easy to use **one-level menu structure with very intuitive functions** for increased usability, faster operation and maximum productivity. No function requires more than three successive button pushes to achieve the desired operation. It doesn't get any easier than this, you will **fly through the functions without ever reading the user manual.**

Comprehensive Functions
With pass/fail indicators

Complete set of CATV features such as Single Channel Measurements, System Scans, Tilt Function, Constellation, Spectrum Analyzer, Service Identification, Datalogs, Reverse Path Ingress Scan, Plan Learning… as well as **comprehensive DOCSIS 3.0 functionality** including Connection Status Information, Quality Parameters for every upstream/ downstream carrier, Throughput and Modem Emulation.

Televes®

Lab-quality Precision
Real-time digital processing

Designed from the ground up to **instantaneously obtain all the information in the signal in real time**, a true milestone in field testing. The H30 Series provides the accuracy and speed needed to detect the faintest transients, ingress, or spurious signals affecting your cable system. **Lab-quality precision available for the first time in such a portable and affordable package.**

100% Automatic
Signal detection

QAM AUTO LOCK

Completely automatic, ITU-T J.83 Annex A/B/C and NTSC parameter detection and measurement with **no setup needed.** The H30 Series meters immediately detect if the input signal is analog or digital and determine its constellation, symbol rate, and other modulation parameters, providing **instantaneous readings with no user intervention.**

Televes®

Functionality?
H30 has you covered

Complete DOCSIS 3.0 functionality, a full spectrum analyzer, all your analog and QAM measurements, tilt, scan & log, and more. All this with full remote control and measurements over the internet.

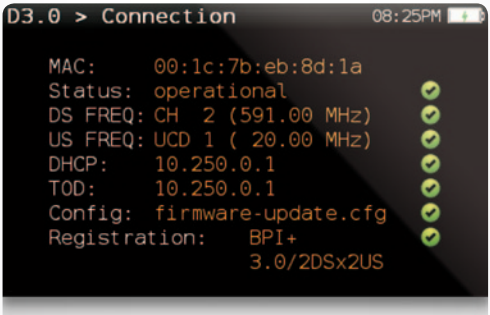
Complete set of **easy-to-use functions** to install and monitor analog and digital cable TV, and DOCSIS 3.0 networks **on-site or remotely.**

Troubleshoot those hard to find, intermittent problems using its unique in its class remote measurement and control capabilities to provide long term monitoring. With the H30 Series meters you can ensure quality at all times, while you are on site and while you are away.

The H30 Series provides the complete portfolio of tools needed to assure the **quality of analog and digital television and DOCSIS 3.0 services** delivered over cable.

Combined with our **powerful real-time advanced techniques** and unparalleled ease-of-use, the H30 is the ideal tool for engineers and technicians installing and maintaining next-generation cable systems.

Televes®



CONNECTION*

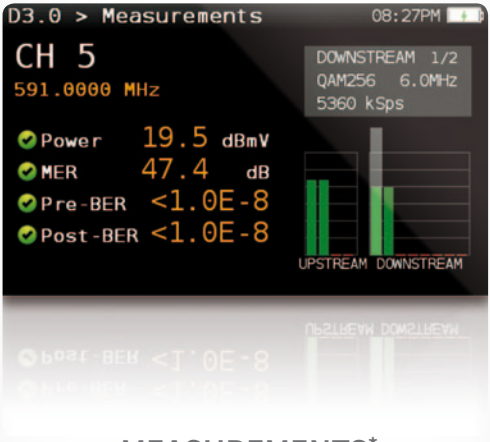
Step by step

Get a step by step pass/fail indication as the modem finds, connects, and registers with the CMTS and get all the critical parameters along the way.

Watch and confirm as the modem first finds a downstream channel then an upstream channel. Afterwards, it'll get the configuration such as an address from the DHCP server, time from the TOD server, and **the full configuration file and registration information.**

*available only in H30D

Televes®



MEASUREMENTS*

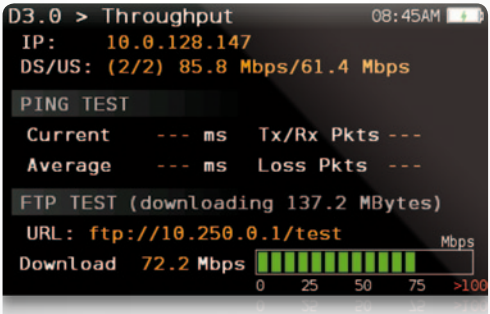
At a glance

See a summary pass/fail view of up to 8 downstream and 4 upstream channels at once. Select one of the channels and see the critical measurements all on the same screen Select from one of the factory configured or user created profiles to set the appropriate pass/fail thresholds.

Get all the pertinent details at a glance for any given channel including the modulation, symbol rate, frequency, power, MER, and both the pre and post error correction Bit Error Rates.

**available only in H30D*

Televes®



THROUGHPUT TEST*

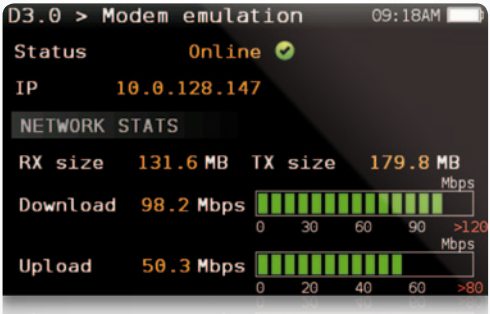
Speedometer

This function **measures the upstream and downstream rates** of the DOCSIS network. The rate measurements are performed using an FTP server that must be configured by the user (URL, file, get/put, user, password).

This feature shows the IP modem within the DOCSIS network and the **maximum speed negotiated** (DS/US). When you start the speed test, the speed value is constantly updated.

*available only in H30D

Televes



MODEM EMULATION*

Building a bridge

This function sets the H30 to be used as a DOCSIS modem and to **use it to give to another device a connection to the DOCSIS network** via the H30's ethernet port.

This feature shows the connection status of the modem as well as the **instantaneous speed and the size of the data sent through the modem.**

**available only in H30D*

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SPECTRUM ANALYZER
2.5MHz to full span

The H30's spectrum analyzer includes 2.5, 6.25, 12.5, 25, 62.5, 125, 250, 500MHz, and 1GHz full span settings, as well as automatic reference level adjustment. **Real-time processing speeds ensure capture of any fast, intermittent plant impairments.** You'll be blown away by the accuracy and level of detail provided by this ultra-portable pocket-sized spectrum analyzer. A definitive tool for identifying and locating noise, interference, ingress and other waveforms that may be affecting cable services quality.

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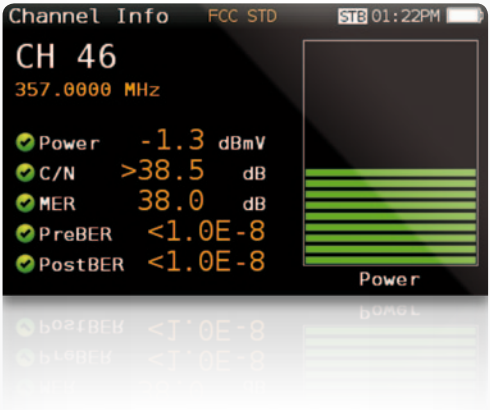

CHANNEL INFO

Less is more

Sometimes a quick glance at a particular channel is all you need. The H30's advanced single channel measurement **automatically detects the type of channel**, providing video and audio levels, V/A, and C/N for analog signals, and Power, C/N, MER, Pre-BER, and Post-BER in digital mode. All these tests are completed using just one button push and all the metrics reported based on user-defined location thresholds **providing pass/fail results easy to interpret** by even the least experienced technician in the team.

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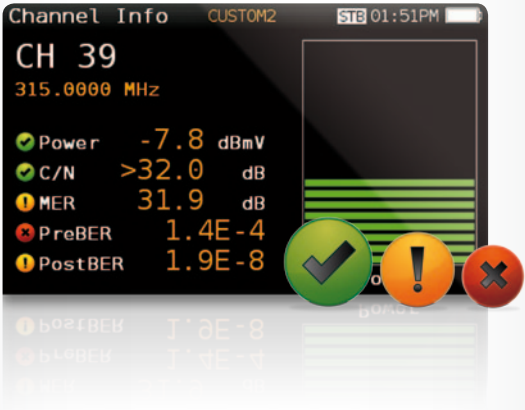
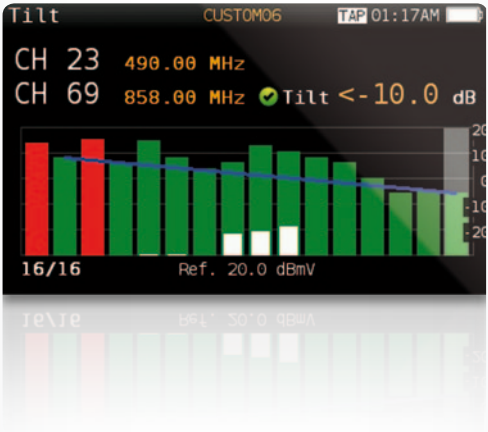


PASS/FAIL INDICATORS
Improve decision making

Reduce installer errors with on screen pass/fail indicators that give a **quick and easy to understand interpretation of the test results.** Different thresholds are available for different testing locations such as headend, launch amp, tap, ground block, customer premises, etc. But not only are there presets, **you can configure your own custom thresholds too.**

Televes®



TILT FUNCTION
Always in balance

Get a quick view of your signal level differences over a specified frequency range so you can apply attenuation or equalization to adjust them. Take the meter to your farthest extents and see at a glance what carriers' power levels are out by their red, yellow, and green colors. Any number **between 2 to 16 analog, digital or DOCSIS channels can be measured** using the tilt measurement, and you can even select which carriers are your reference points to **determine the tilt between any of the channels included in the measurement.**

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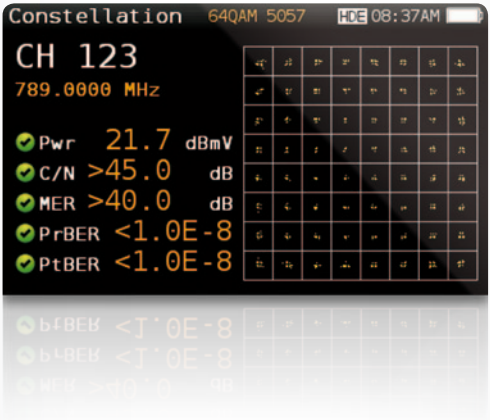

CONSTELLATION DISPLAY

Fine-tune your digitals

The Constellation display is an indispensable tool for the technician when trying to measure the quality of the QAM modulated signals. **Constellation diagrams help detect the presence of noise, phase jitter, interference, and gain compression,** all of which impact overall signal quality leading to service disruption**.** By visually inspecting the size and shape of the dots within the constellation matrix, the technician can easily identify the nature of the problem.

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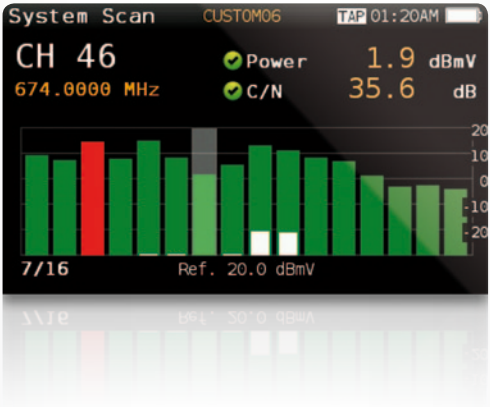

SYSTEM SCAN
With channel plan auto-learn

Learn which channels are present in your distribution with the ultra-fast learning plan feature. Then select any stored plan and scan every existing analog and digital channel in real time to determine the overall frequency response of the system. The scan measurement leverages the location based thresholds to clearly show whether or not signal levels comply with the cable system's specifications by their green, yellow and red bar level indicators. This gives an **easy-to-understand real-time view of the distribution,** including the BER and MER values of the selected channel.

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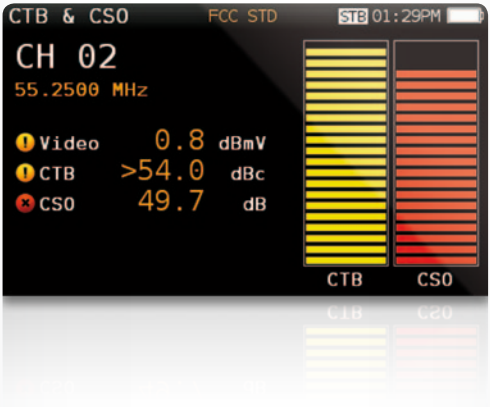

CSO & CTB

Deep dive into those analogs

Cable TV networks are generally located in densely populated areas or extend over large geographical regions. This makes cascading large numbers of amplifiers a frequent necessity that can be the cause of quality of service to drop below minimum acceptable levels. Composite second order (CSO) and composite triple beat (CTB) are commonly used quality parameters that can be measured with the H30 **to ensure the best possible quality video for customers receiving analog signals.**

Televes®

VOLTMETER & HUM

Cover all your bases

Don't want to worry about bringing a seperate volt meter with you?... No problem, the H30 will do that too. The H30 will also give you a Hum percentage to help you **diagnose those ground and power interference problems** that may result from a defective power supply or faulty/overloaded power inserters.

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REVERSE PATH INGRESS SCAN

Maximum, average, peak

Help identify reverse path problems before your customers are affected. Poorly shielded coaxial cable and faulty terminations are important sources of ingress noise which can easily add up in the return due to the large number of subscriber-generated signals that are sent back to the headend. The combined and amplified interference is often responsible for service disruption, so **having a good reverse path ingress scan tool is always a must.**

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DATALOGS

Save and Download

As you are taking measurements or looking for problems, you can **log data samples of all the signal parameters to further analyze problems, or just to keep for your records and job reports.** May be a great training tool for others as well.

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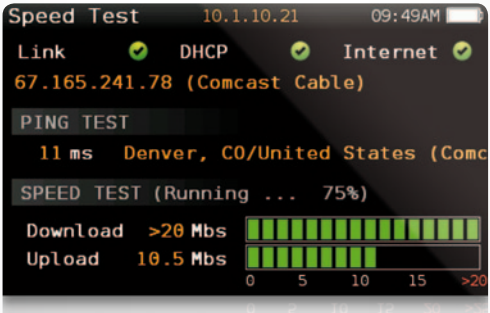

IP SPEED TEST*

Double-check connectivity

Need a quick check of your data network at the headend or at a customer's unit? The H30's IP Speed Test allows you to **check your basic network performance parameters** so you don't need to get your laptop out. This includes your upload and download speeds as well as your ping times and the server you are testing with.

**Optional feature*

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SERVICE INFO*

Study MPEG details

Do you want to know what program content is on that QAM channel? The H30's Service Info feature will tell you. In addition to the short description of the service, you'll get the important parameters including the NIT, PAT, and TSID for the channel, and for the individual service you'll get the SID and the PID, encode type, resolution, and bit rate for both the audio and video, all of which greatly help when trouble shooting your encoder configuration.

**Optional feature*

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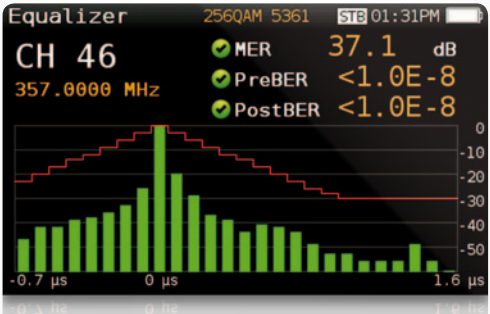

EQUALIZER DISPLAY

Track down impedance mismatches

You cleaned up your system and for the most part things are working reasonably well, but modems in some parts of the system are still having problems, or your higher order QAM channels aren't as good as you'd like... one possible culprit is microreflections, reflections, or echoes. Impedance mismatches are everywhere: connectors, amplifier inputs and outputs, passive device inputs and outputs, and even the cable itself. The QAM auto-equalizer filter helps to get rid of this multi-path interference in the cable plant. The H30's equalizer analysis function displays the level of the equalizer coefficients in real time **helping you pinpoint any possible mismatches in the distribution that can cause problems.**

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TECHNICAL SPECIFICATIONS

Frequency	Range: 5 MHz to 1002 MHz
	Resolution: 10 kHz
	Tuning: Frequency or Channel
Input	Impedance: 75Ω F-type connector
Profiles	10 factory profiles and up to 20 user generated profiles
Spectrum Analyzer	Span: 2.5, 6.25, 12.5, 25, 62.25, 126, 250, 500 MHz and Full Span
	Scale: 5 and 10 dB/div
	Automatic and manual reference level
Reverse Path Ingress Scan	Range: Selectable 5 to 42, 5 to 68, and 5 to 85 MHz
	Mode: Peak, Average, Min and Real-time
Digital Measurements	Demodulation: ITU-T J.83 Annex A/B/C standard
	Support: 16/32/64/128 and 256 QAM, QPSK
	Symbol Rate: 2 to 6.9 MS/sec
	QAM Auto-Lock: Automatic detection of signal characteristics and modulation parameters
	DFE filter On/off
	Accuracy: +-2dB
	Resolution: 0.1 dB
	Power measurement: -30 to +60 dBmV
	C/N: up to 45 dB
	MER: up to 40 dB
	PreBER and PostBER (Annex B): 1.0E-3 to 1.0E-8
	BER (Annex A/C): 1.0E-3 to 1.0E-8
Constellation	Display: 16, 32, 64, 128 and 256 QAM
	Zoom capability
Equalizer	Graphical representation

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Analog Measurements	Accuracy: +-2dB
	Resolution: 0.1 dB
	Level: -30 to +60 dBmV
	V/A: up to 30 dB
	C/N: up to 54 dB
	CSO and CTB
Learning Plan	Factory defaults: Standard CATV, Return (T-Channels), HRC, IRC, Broadcast, CCIR
	Custom: up to 20 user-generated channel plans
System Scan	Channels: User selectable zoom up to all channels (analog and or digital)
	Measurements: Level bar representation, C/N, and MER/BER of the selected channel
Tilt	1 to 16 or all channels (analog and/or digital)
	Selectable markers
Voltmeter	Range: 9 to 150V
	Accuracy: +-1%
Hum	Range: 2 to 5%
	Accuracy: +-1%
IP Test (Optional)	DCHP Status, connection status, ping, lost packets, DS/US speeds
Service Info (Optional)	NIT, PAT, TS ID, Number of services, Service name, SID, PID, Encode type, Resolution, Audio and Video rates, and DOCSIS

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Cable modem (H30D3 only)	Modes: DOCSIS 3.0/2.0/1.1/1.0/BPI/ BPI+
	DS: up to 8 channels / US: up to 4 channels
	Connect Status: DS and US frequency, DHCP, TOD, configuration name, security level, DOCSIS version
	Measurements: Power bar representation of DS and UP channels and Power, MER, PreBER and PostBER of the selected channel
	Throughput Test: Modem IP, DS and US maximum speed, current ping and average delay, lost packets, transfer speed
	Modem Emulation: Modem connection status, instantaneous speed and size of the data sent through the modem

GENERAL SPECIFICATION

Display	2.8” TFT 400x240 full color
Weight	Ref. 593101 & Ref. 599102: 1.12lb (510g) / Ref. 599103: 1.3lb (632g)
Dimensions	6.9x3.9x2 in / 175x100x52 mm (HxWxD)
AC Adaptor	Input: 100-240 VAC 50-60Hz / Output: 12 VDC, 2A
Battery	LiIon smart battery (7.2VDC, 2300mAh)
Operating time	Up to 4.5 hours (modem OFF) / Up to 2 hours (modem ON)
Storage Temperature	23º to 104ºF (-5ºC to 45ºC)
Communication Interface	Ethernet interface for remote control, measurements, datalog retrieval and automatic software updates
Storage	400 MB (internal) for measurements

Televes®

CBE303 US

S/N: 2P3C001000014

MAC : 001C7BEB8D20

H30 Televes

CATV METER DOCSIS 3.0

REF.593103

Recycle or dispose of used batteries properly.
Deposite las baterías en los contenedores al efecto.

Replace the batteries only with the same type. *Reemplace las baterías solo por el tipo recomendado*

12V ⎓
Imax.:2,0A

FCC This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1)This device may not cause harmful interference,and (2)This device must accept any interference received, including interference that may cause undesired operation.

100% Designed, Developed, and Manufactured by Televes Corporation

MAC DOCSIS: 001C7BEB8D20 0614

MAC:000E7C400349

S.N.- 04140996300017